DOCUMENT RESUME

ED 190 666 TM 800 468

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TITLE Sources of Satisfaction. School Subjects and What Secondary School Students Think of Them. Item 13, Set No. 2, 1979. Research Information for Teachers.
INSTITUTION New Zealand Council for Educational Research, Wellington.
PUB DATE 79
NOTE 9p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement: Foreign Countries: *Intellectual Disciplines: *Relevance (Education): Secondary Education: Student Attitudes: *Student Interests
IDENTIFIERS New Zealand: *Satisfaction: Two Factor Theory of Job Satisfaction (Herzberg)

ABSTRACT

Carried out on a small sample, this study provides some clues as to why pupils in New Zealand secondary schools prefer various subjects. A questionnaire with lists of possible reasons for liking/disliking particular subjects was administered to 367 secondary school pupils in 16 classes in various cities throughout New Zealand. The sample was not necessarily representative of the grade levels for achievement, ability, or subjects taken. The results are reported for the total group of males and females, because there were very few sex and class differences. A summary of the results showed that the preferred subjects selected were most likely to reflect an interaction with the intrinsic characteristics of the subject: interest, usefulness, and achievement rated highly also. When a subject was chosen as least preferred, extrinsic factors such as teaching quality became important. Using the analogy of a school subject as a job and of a teacher as a foreman, the results support Herzberg's theory of job satisfaction: suggest that management theory may be applied to classroom settings: and that techniques such as better teaching will have limited impact on student attitudes, and at best, will reduce dissatisfaction. (Author/GK)

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ED190666

TM 800468

item 13

set research information for teachers

number two 1979

Sources of Satisfaction

School subjects and what secondary school students think of them.

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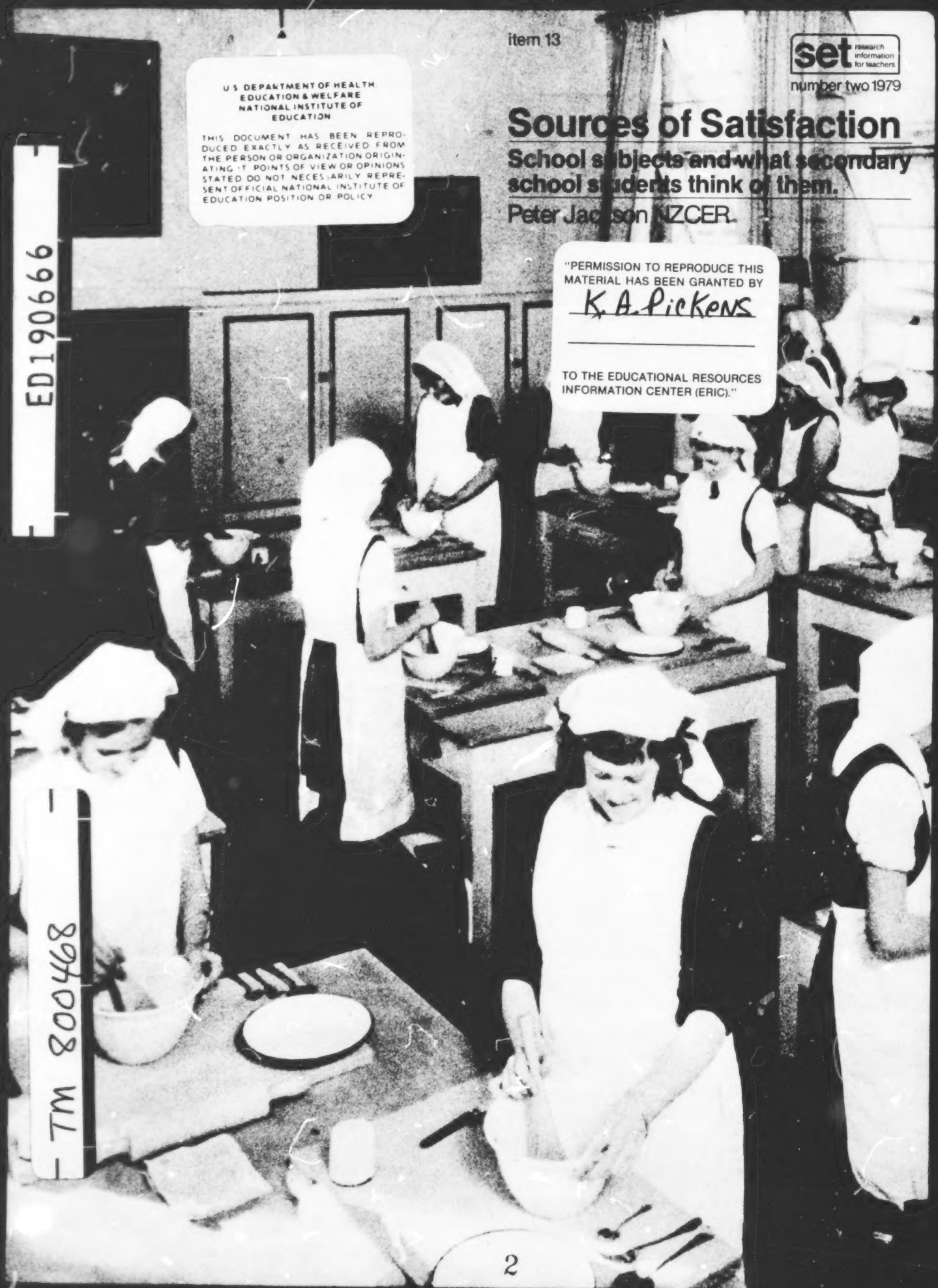

Sources of Satisfaction

It never takes very long to discover what a secondary school student's attitude to a school subject is. Typically the reply will be in the current idiom and mean either totally enjoyable or totally unenjoyable. It is more difficult to find out exactly what it is about the subject that makes it enjoyable or unenjoyable. In an effort to find out something about this a small study was mounted. The results are reported in this article. Interesting conclusions are drawn. However, these are hypotheses that need to be tested further, rather than firm findings.

The method

A questionnaire with lists of possible reasons for liking or disliking particular subjects was developed. The lists of reasons included three basic types. These were:

(a) *Intrinsic reasons specific to each individual subject and its content.*
For example, it is likely that a student would say that a reason why he enjoyed woodwork was that he enjoyed working with his hands. Such a response is unlikely to be typical of students who are asked why they enjoy English.

(b) *Intrinsic reasons applicable to all subjects.* These are about the individual's interaction with the subject. For example, interest in the subject and attaining good marks in it. It should be just as likely for a student to be interested in getting good marks in science as it is for a student to be interested in getting good marks in a foreign language.

(c) *Reasons extrinsic to the subject.* For example, relationships with the teacher. Relationships with the teacher, or the characteristics of the teacher, are extrinsic to the nature or content of any subject. There is no obvious reason why the quality of teaching should be a reason for liking one subject and for not liking another subject.

Two lists of reasons were offered to the students. One was of possible reasons for liking a subject and the other of reasons for not liking a subject. I will call these 'satisfiers', that is, things which made the pupils satisfied with the subject or made them like it, and 'dissatisfiers', things which made them dissatisfied or made them dislike the subject. The students were then asked to:

(a) nominate ***the subject they most preferred,*** then
(i) select from the list of satisfiers, up to 3 reasons for liking this subject;
(ii) select from the list of dissatisfiers up to 3 reasons for not liking this subject.

(b) nominate ***the subject they liked least,*** then
(i) select from the list of dissatisfiers up to 3 reasons for not liking this subject;
(ii) select from the list of satisfiers, up to 3 reasons for liking this subject.

They could, if they wished, supply reasons that did not appear on the lists provided. Only a few pupils did this and their responses do not affect the analyses reported here.

In essence, each pupil was asked to say why they *liked* their most preferred subject, and what aspects of that subject they *did not like.* Then they were asked the same for the subject which they preferred least.

The sample

One hundred and sixty-five Form 5 pupils and 202 Form 4 pupils in 16 classes in seven secondary schools in various cities and towns throughout New Zealand answered the questionnaire. There were 180 females and 187 males in the total sample. The sample was not necessarily representative of Form 4 and Form 5 for achievement, ability, or subjects taken. Conseqently, one should hesitate to generalize from the findings.

The results

The results are reported for the total group of males and females, Form 4 and Form 5. This is because there were very few sex and class differences. Where such differences ocur they will be noted later. There were some differences between subjects, and these will also be reported later.

The subjects chosen as most and least preferred

Because it is not known whether the sample was representative the raw numbers of pupils who nominated a subject as most or least preferred are likely to be misleading. However, it is possible to report the ratio of those who nominated a subject as most preferred to those who nominated it as least preferred. This technique gives an indication of whether the subject is more liked or more disliked by the pupils who take it. See Table 1. A ratio of 6.70: 1 (as for Woodwork/Metalwork) indicates that 6.7 students choose the subject as their most preferred subject

TABLE 1

Ratio of times each subject listed as most preferred to times listed as least preferred subject.

Subject	Ratio	Comment
Woodwork/ Metalwork	6.70 : 1	all respondents male
Art	5.33 : 1	
Typing	4.00 : 1	all respondents female
Technical Drawing	2.99 : 1	
Biology*	1.94 : 1	
Commercial Subjects	1.17 : 1	
English	1.11 : 1	more females prefer
Foreign Language	1 : 1.24	more females prefer
Social Studies	1 : 1.28	
Mathematics	1 : 2.43	equal number of male and female pupils in prefer category
Science	1 : 2.43	more males prefer
Music*	1 : 4.17	

*Samples for these two subjects very small

for every one student choosing it as their least preferred i.e., the subject is well liked by those who take it. Conversely, a ratio of 1:4.17 (as for Music) indicates that for every one student choosing the subject as the most preferred, 4.17 choose it as their least preferred, that is, the subject is not well liked by those who take it.

In Table 1 and for the discussion of results, some subjects have been combined, for example, all foreign language subjects were put together, woodwork was combined with metalwork, and social studies was combined with geography and history.

It is readily apparent from Table 1 that craft based subjects are more likely to be listed as most preferred, while traditional academic subjects are more often listed as least preferred subjects. This may reflect the element of choice that students have. It seems reasonable to suppose that where a subject is optional, and those who do not like it can choose not to do it, then the ratio of students liking the subject should increase. Conversely, where the subject is compulsory and all students are compelled to take it, the ratio of those liking the subject will fall, that is, a greater proportion of students will not like it.

Principal causes of satisfaction and dissatisfaction with subjects

(a) Reasons for liking the *most preferred* subjects.

There were six main reasons offered by the pupils.

TABLE 2

Reason	% of Pupils giving this reason	Type of reason
Interest in the subject	50%	Intrinsic
Usefulness after leaving school	37%	Intrinsic
Good achievement (marks)	35%	Intrinsic
Specific aspects characteristic of the chosen subject	34%	Intrinsic
Variety in the subject	28%	Intrinsic
Quality of the teaching	23%	Extrinsic

It is apparent that students regard aspects that are intrinsic to the subject to be of prime importance as satisfiers. Extrinsic aspects, for example, teaching, play a lesser role in why a subject is liked. Typically, if a student is able to find interest in a subject and a potential usefulness for his study after he leaves school; if he does well in the subject and enjoys a specific characteristic of it (e.g., using hands in woodwork, or practical work in science); then he will find studying the subject satisfying and will enjoy taking it.

(b) Reasons for disliking the *most preferred* subject.

Even though one can like something, it does not necessarily follow that one likes everything about it. So it is with students and their most preferred school subject. When asked why, students tended to raise matters which were under the control of the teacher rather than matters inherent in the subject or under their own control, that is, their complaints were about extrinsic factors. The three most frequently given sources of dissatisfaction were: the extent to which memorizing of material was required, (32 percent of the students); the extent to which the teacher decided what was done in the class, (32 percent) and the amount of homework that was set (24 percent).

(c) Reasons for disliking the *least preferred* subject.

Reasons for disliking the least preferred subjects were much more widely spread than were reasons for liking the most preferred.

TABLE 3

Reason	% of Pupils giving this reason	Type of reason
Finds subject boring	46%	Intrinsic
Poor achievement	36%	Intrinsic
Dislike of teacher	29%	Extrinsic
Quality of teaching	26%	Extrinsic
Amount of memorizing required	22%	Extrinsic

The students identified two intrinsic variables as being the most important determiners of disliking a subject. But extrinsic variables clearly are of greater importance than they were as reasons for liking the most preferred subject.

(d) Reasons for liking the *least preferred* subject

Even though they dislike a subject, students can sometimes find something about it that provides satisfaction. Here they tended to find satisfaction with intrinsic factors rather than extrinsic ones. In particular, aspects of the least preferred subject that were specific to it were most frequently cited, e.g., working with hands, practical work etc. (30 percent). The usefulness of the least preferred subject was frequently cited as a reason for liking it (28 percent) and surprisingly, a number of students found intrinsic interest in a subject even though it was their least preferred subject (24 percent).

Summary

So far the results of this study can be summarized as follows: when a student selected a certain subject as his most preferred one, the reasons for preferring it were most likely to reflect his interaction with the intrinsic characteristics of the subject; interest, usefulness and achievement rated highly as satisfiers. Conversely, when a subject was chosen as the least preferred, extrinsic factors such as the quality of teaching become important. Nevertheless, some intrinsic factors such as boredom with the subject and low achievement are still rated as the most important. When students were asked to identify things that dissatisfy them about their most preferred subjects or satisfy them about their least preferred subject the results are much less clear although the trend towards intrinsic satisfiers and extrinsic dissatisfiers can be seen to persist to some extent.

Class, Sex and Subject Differences

Some differences were observed in the pattern of responding to variables of class, sex and subject. Many of these differences are quite minor in nature.

Differences Between Classes

More Form 4 pupils reported dislike of their teacher as a reason for disliking their least preferred subject than 5th Formers. Also, Form 4 pupils were dissatisfied with homework more frequently than Form 5 students.

Sex Differences

There were few differences between males and females. Females were more likely to give liking a teacher as a reason for liking a subject, while males were more likely to find satisfaction with subjects that involved using the hands, e.g., woodwork. This latter finding reflects the extent to which males dominated the choice of woodwork as a preferred subject in the sample studied. In summary, there was a slight tendency for females to be satisfied more often by extrinsic variables than males.

Subject Differences

There were a number of differences between subjects, often reflecting the character of the subject, e.g., practical work figures as a reason for liking science but not as a reason for liking English. However, a number of other differences also occurred where the responses for individual subjects differed from the group as a whole. These differences are now highlighted. Some subjects are not discussed as the samples were too small to be of much value, e.g., biology and music.

(a) English

Students choosing English as their most preferred subject were much more likely than the sample as a whole to offer the opportunity to express themselves as a reason for liking a subject. They are also more likely to report liking the teacher as satisfying than were other students.

Thoses who disliked English complained of the amount of written work that was required and about the amount of homework that was given. They were much less likely to complain of the quality of teaching and the need for memorizing. This group (like those who preferred English) found satisfaction in English with the opportunity to read and express themselves and because of the usefulness of English after leaving school.

(b) Foreign Languages

Students who identified a Foreign Language as their most (or their least) preferred subject tended to be very like the total group except for an increased tendency to rate liking the teacher as a satisfier. They were more likely to consider memorization in a negative light and similarly the lack of usefulness of a foreign language to them after leaving school.

(c) Mathematics

Students choosing mathematics as their most preferred subject more readily found satisfaction in their achievement than did other students. They also found satisfaction with mathematics in that it provided them with an intellectual challenge and the opportunity to use numbers and symbols. By contrast, there seemed to be comparatively little variety in mathematics and this was not seen as a satisfier. Those who disliked mathematics were more likely than most to find dissatisfaction in the use of numbers and symbols, which they disliked, and were more likely than most to report poor achievement. Those who disliked mathematics did find some satisfaction in the fact that mathematics would be useful to them after leaving school.

(d) Science

Students who like science seemed quite simply to like it because it interested them. Eighty-one percent of respondents answered this way; this is far above the result for the whole sample. Otherwise, enjoyment of practical work also satisfied them but liking the teacher played no part in satisfying those pupils who liked science. There were no unusual differences in reasons why pupils disliked or were dissatisfied with science.

(e) Technical Drawing

Pupils liked it because the teacher told them exactly what to do. This was quite different from results of the sample as a whole. On the other hand those dissatisfied gave the same reason — the teacher determined exactly what was done in class. There seems to be a decided split in the attitudes of the students studying Technical Drawing. Some students want to be told what to do and some want more freedom to choose for themselves what they do.

(f) Woodwork/Metalwork

Inevitably, the amount of work required to be done with the hands was seen as the principal satisfier. The chance to choose their own project was also a satisfier, but variety in the subject matter and extrinsic variables were very infrequently regarded as satisfiers. The principal dissatisfiers were written work and theory. Clearly woodwork students preferred to get on with the practical work.

(g) Social Studies

Intrinsic enjoyment of the subject greatly exceeded that of the average of the total sample. Seventy-eight percent of those satisfied gave this response. Even for the group which disliked social studies intrinsic interest served as a satisfier. The principal difference from the norm for dissatisfiers was that the subject was much more likely to be seen as valueless to students after leaving school.

(h) Typing

The usefulness of the subject rates very high in students' minds (82% rated this as a satisfier). Intrinsic interest and variety was rated much lower than the norm.

(i) Commercial Subjects

Success in the study of commercial subjects was a much more important satisfier than it was with most other subjects, although lack of success did not serve as a dissatisfier. Lack of opportunity to use imagination and the quantity of homework were rated as dissatisfiers more often in this subject than in others.

(j) Art

Students who like art were more likely to like choosing their own work and expressing themselves than others. Usefulness of the subject, and extrinsic variables were cited as satisfiers much less frequently than usual.

Profiles of the Subjects

A series of graphs (Figure A) have been made. They show how the subjects were rated by the students who were satisfied with them, for three instrinsic factors — perceived interest, variety in subject matter and usefulness to the student after leaving school. As can be seen from Figure A, there were marked differences in the ways different subjects were viewed on these three variables.

It is apparent that science and social studies were the subjects regarded as having the greatest interest, while, art, maths and typing have the lowest. Science, social studies and art provide the most variety, and maths, typing and commercial subjects, the least. Finally maths, commercial subjects and typing are perceived as being the most useful to pupils and social studies, foreign languages and art are the least useful. English and technical drawing are perceived as being at an average level for all three variables.

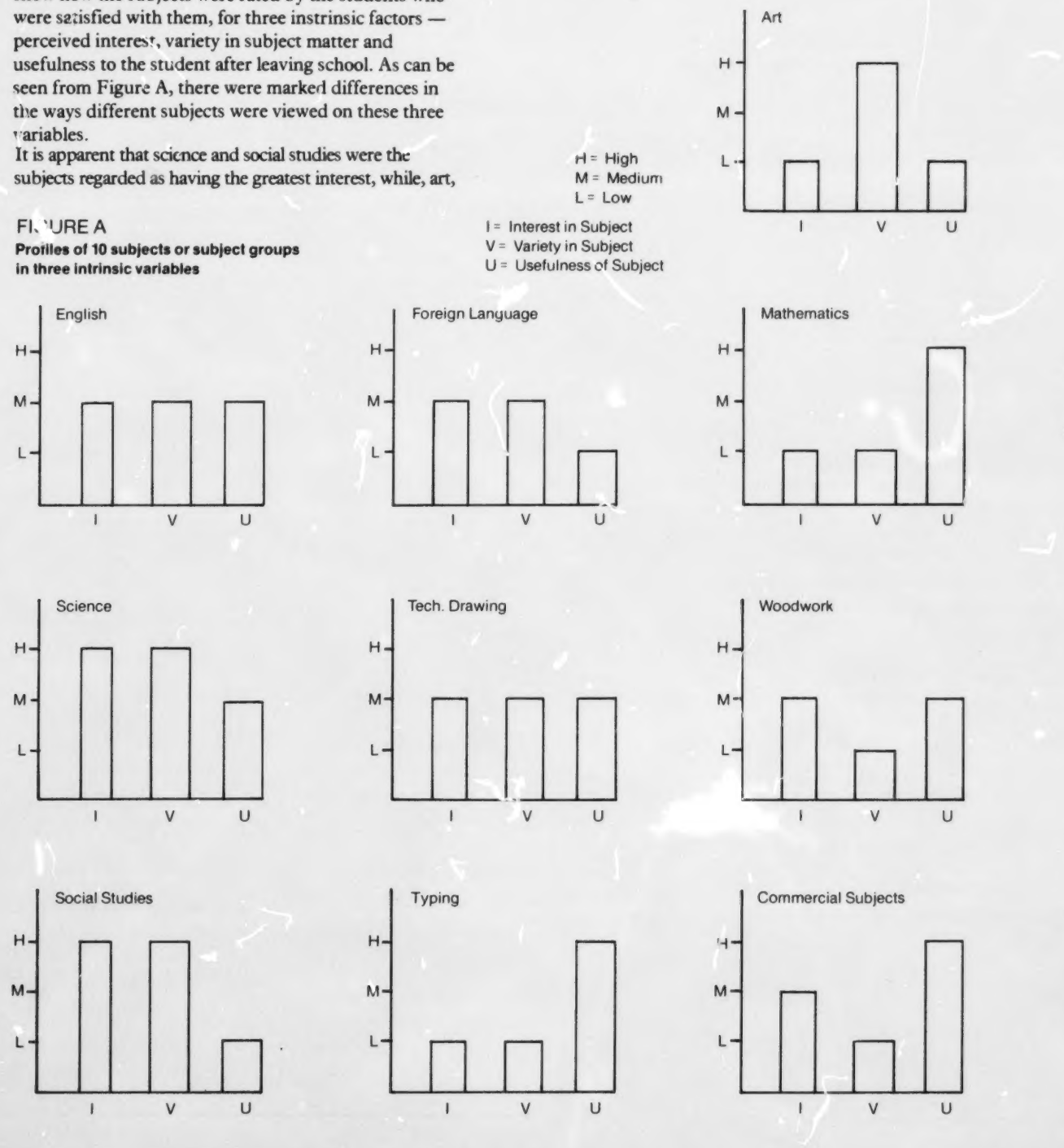

FIGURE A

Profiles of 10 subjects or subject groups in three intrinsic variables

Theoretical Explanation of the Findings

The results of this study seem to fit in well with the theory of job satisfaction propounded by Hertzberg. Hertzberg's Two-Factor Theory of Job Satisfaction suggests that two principal factors determine satisfaction and dissatisfaction.

Firstly, motivator (or satisfier) factors, and secondly, hygiene (or dissatisfier or maintenance) factors. Positive attitudes to a job go with factors linked to the job, for example, achievement, the task itself, responsibilities, and so on. These job content factors are intrinsic to the job. They are defined as the motivators, i.e., they make people enjoy what they are doing. Presence of these factors is said to contribute to job satisfaction. However, if they are absent they do not contribute to job dissatisfaction.

Conversely, there is a set of factors that are extrinsic to the job and are related to the context the job is found in rather than to its content. These 'hygiene' factors (in the industrial setting) are such variables as company policy, relations between staff, working conditions and supervision. In the school setting these would be principally those things that fall within the compass of the teacher to control. Hygiene factors are said to contribute to dissatisfaction. The absence of them does not contribute to satisfaction.

If Hertzbergian theory is right, people like a job because they enjoy the work and they do well at it; they dislike a job because of poor supervision or working conditions and so on. People less frequently dislike their work because of an absence of variety, lack of interest, etc. Conversely, they like work because of good supervision less frequently than they dislike it for this reason. In essence, Hertzbergian theory claims that good management and working conditions will not give people satisfaction with their job but bad conditions and bad management will make them dissatisfied.

Recent evidence on job-satisfaction tends to support a modification to the strict Hertzbergian approach just outlined. Intrinsic factors can also be determinants of job dissatisfaction as well as satisfaction, for example, a feeling that the job is boring, can make you dissatisfied. (Warr and Wall, 1975).

The results of this study have yielded some support for the modified Hertzbergian theory applied to the classroom. In this context, the individual subjects students prefer or do not prefer are like separate tasks or jobs, each with their own intrinsic and extrinsic factors. Figure B reflects the findings of this study. In general, but not completely, intrinsic variables are cited more frequently as satisfiers than dissatisfiers. Conversely, extrinsic variables are more frequently cited as dissatisfiers than satisfiers.

Figure B

Hertzberg in the Classroom — percent times stated as reason for preferring or not preferring a subject

Type of Reason	Reason	Low Subject Attitude Event (Percentage of students giving each reason for *not* preferring a subject)	High Subject Attitude Events (Percentage of students giving each reason for preferring a subject)
Intrinsic	Interest	46%	50%
Intrinsic	Achievement	36%	35%
Intrinsic	Utility	14%	37%
Intrinsic	Specific Subject Technique	14%	34%
Intrinsic	Variety	11%	28%
Extrinsic	Teacher Explanation	26%	23%
Extrinsic	Liking for Teacher	29%	14%
Extrinsic	Time spent on topics	14%	1%
Extrinsic	Amount of Homework	9%	4%
Extrinsic	Teacher decides what is done in class	9%	1%

Conclusion

This study, although carried out on an unrepresentative and rather small sample, has attempted to give some clues why pupils in New Zealand secondary schools prefer various subjects. The results have been put alongside Hertzberg's theory of job satisfaction and there was found to be a promising fit. Although the analogy of a school subject as a job and of a school teacher as the pedagogic equivalent of a foreman cannot be taken too far, the results suggest that management theory might be applied to the classroom setting with some profit. Certainly, these theories do offer a framework into which the attitudes of students to subjects and to school can be slotted. The tentative conclusion of this study is quite clear: students tend to find the cause of satisfaction within themselves and are more likely to look for their cause of dissatisfaction within others — teachers and/or the system. This may be cold comfort to teachers. The implication is that techniques such as teaching better, or varying the system will have limited impact on the attitudes of their students, at best it will reduced dissatisfaction. Teachers, if they wish to really improve student attitudes, may have to find ways of varying the nature of the subject material, increasing the variety of the subject matter, convincing the students of the inherent interest of the subject matter, and persuading them that the subject will have relevance in their adult life.

Reference

Peter Warr and Toby Wall, *Work and Well-being*, Penguin, 1978

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